

Notice of Allowability

Application No.

10/811,179

Examiner

Jason Uhlenhake

Applicant(s)

KATAYAMA, NAOKI

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/16/2007.
2. ☒ The allowed claim(s) is/are 4,6-9,11-13 and 20-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

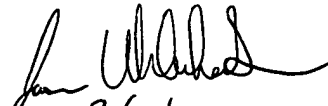
4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


STEPHEN MEIER
SUPERVISORY PATENT EXAMINER


3/21/07
U.S. Patent and Trademark Office
PTOL-37 (Rev. 08-06)

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ronald E. Brown on March 21, 2007.

The application has been amended as follows:

In claim 12, after the last paragraph, include the claim language "wherein the heat generated by the driver element is conducted to the heatsink to be dissipated inside the cover".

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claim 4 is the inclusion of the limitation of a recording apparatus that includes a heat sink being disposed between the flexible wiring board and the head holder such that the heatsink is spaced from the outer surface of the head holder with a first clearance therebetween, the first clearance that is open to the atmosphere in its opposite ends in a direction of movement of the printing head. It is this limitation found in each of the claims, as it is claimed in the combination,

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that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 6-9, 13, 21-24 is the inclusion of the limitation of a recording apparatus that includes a relay circuit board to which the flexible wiring board is connected is disposed on the outer side of a second wall with a space there between; and first portion of the heatsink extends from the vicinity of a connecting portion where the edge of the first wall and an edge of the second wall are connected, while the second portion of the heatsink extends into a space between the relay circuit board and the head holder. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

The primary reason for the allowance of claims 11-12, 25-26 is the inclusion of the limitation of a heatsink which is disposed between the flexible wiring board and the head holder and releases heat generated by the driver element; a cover which is disposed on a side of the flexible wiring board opposite to the head holder, and protects the flexible wiring board; and an elastic member provided between the driver element and the cover such that the driver element is pressed toward the heatsink by a pressing force of the elastic member, wherein the heat generated by the driver element is conducted to the heatsink to be dissipated inside the cover. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

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The primary reason for the allowance of claims 20 is the inclusion of the limitation of heatsink for releasing heat generated by the driver element, the heatsink disposed between the flexible wiring board and the head holder such that the heatsink is directly held in close contact with a surface of the flexible insulating band which surface is opposite to another surface of the flexible wiring board on which the driver element is disposed, at a positioning corresponding to a position in the another surface where the driver element is disposed, a portion of one of two opposite surfaces of the heatsink, which surface is opposed to the head holder and on the side opposite to the flexible wiring board, being separated from the head holder with a clearance to dissipate the heat conducted from the drive element via the flexible insulating band into the clearance, not in contact with the head holder. It is this limitation found in each of the claims, as it is claimed in the combination, that has not been found, taught or suggested by the prior art of record which makes these claims allowable over the prior art.

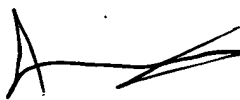
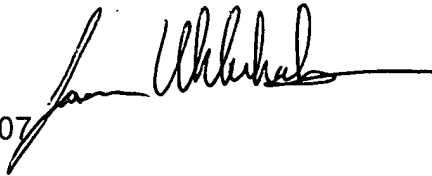
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Uhlenhake whose telephone number is (571) 272-5916. The examiner can normally be reached on Monday - Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSU
March 21, 2007



STEPHEN MEIER
SUPERVISORY PATENT EXAMINER